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ABSTRACT

Computer-based and audio tape materials were compared for their effectiveness in helping students practice Chinese language lessons. Subjects were enrolled in an intensive elementary course in Mandarin Chinese. The textbook and audio tape were prepared by the Beijing Language Institute in China, and the computer-based material was developed by the author using HyperCard based on the textbook. Written and spoken components were tested, using tests developed by the instructor, a native of China. The instructional materials were used alternately in the 16-week course at the University of Northern Iowa (Cedar Falls). Students performed better in the weeks the computer-based materials were used, although in some areas the two instructional tools do not show noticeable differences. For example, computer-based materials do not show any advantage in helping with listening comprehension. Performance in writing Chinese characters was enhanced by computer use, and students preferred it to the audiotape. The study demonstrates that it is possible to use computer assisted instruction to teach non-alphabetic languages. (SLD)

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Title:

A Pilot Study: Comparing the Use of Computer-Based Instruction Materials and Audio-Tape Materials in Practicing Chinese

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A Pilot Study: Comparing the Use of Computer-Based Instruction Materials and Audio-Tape Materials in Practicing Chinese

Much of the research has already indicated that both computer-based and audio tape materials can increase students' performance in learning a foreign language. Seldom has there been a comparison of the two materials in helping students to practice the skills associated with the language. This present pilot study presents the results of comparing these two materials to help students practice Chinese. The major question that is addressed in the study relates to the effectiveness of using the two instructional materials.

In order to obtain the results, an audio tape, which developed by the Beijing Language Institute, and a computer program, which developed by the author, were used in the pilot study. The two different instructional materials were used alternately in part of a sixteen week long Introduction to Chinese course in the University of Northern Iowa. All subjects were enrolled in a five-credit, intensive elementary Chinese course during the fall semester 1991. A questionnaire that included items concerning the students' experience in learning a foreign language, and experience with Mandarin Chinese was given to all the participants. All subjects indicated that they had a few years experience in learning a foreign language but not specifically Chinese.

The textbook and the audio tape used in the class were prepared by the Beijing Language Institute. The priority was given to everyday expressions concerning clothing, food, housing, communication, entertainment, social intercourse, etc. The learners studied some information on China's culture, and history. Basic Chinese phonetics and grammar were dealt with in the Audio Lingual Approach.

The computer-based material was developed by the author using the Macintosh HyperCard program. The lessons that the author created were based on the textbook material. The priority was given to the recognition of the difference between the Chinese and English languages. The learners got the information by clicking and pointing to "buttons" on the screen. Phonetics and grammar were also dealt with by using the Audio Lingual Approach. Each lesson was supplemented with an exercise.

In order to eliminate the possibilities of unfamiliarity with the instructional tools, all subjects were taught to operate the audio tape machine and the Macintosh before the experimental phrase begun. To eliminate the draw back of difference in difficulty between each lesson, the two instructional materials were use alternately during the experimental phrase. A weekly test was used to evaluate the students' performance and the effectiveness of the two materials.

Weekly tests were developed by the Chinese instructor who came from China. Each test contained five parts. Part 1 dealt with listening comprehension. Students were asked to listen to a dialogue and answer the questions orally. Part 2 dealt with transcription. Subjects were asked to translate the Mandarin syllables into pinyin. Pinyin is an alphabetic format for writing the Chinese language. Part 3 dealt with translation. Subjects were asked to translate both English-to-Chinese and Chinese-to-English by using pinyin. Part 4 dealt with character writing. Subjects were asked to translate the English sentences into Chinese characters. Part 5 deal with tone recognition. Subjects were asked to identify both spoken and written form of Mandarin. Each part of the test was worth 20 points, with a total of 100 points for test. Thirteen tests were given to the subjects for the entire course, however, only eight of the tests were used within this study.

Because of the experimental phrase began at the eighth week of the course, the comparison of the two instructional tools focused on the skills associated with the final eight weeks. Subjects' performance on each part of the test were reported to

the author weekly. The mean score of each subject was compared to the others to find out the difference between treatments.

The results illustrated that students performed better in the weeks in which computer-based materials were used. The results also indicated that in some skill areas, the two instructional tools did not show a noticeable difference in helping subjects to learn Chinese. For example, in the listening comprehension part, the performance of the subjects did not show an obvious difference when compared. Results also indicated that subjects performed the best on the translation part while they were using the CBI material. It may have been because subjects had the chance to actively practice their reading, writing, and recognizing skills directly from the CBI materials. In the character writing part, results showed that students' performance was better on the weeks in which CBI was used. Also, according to the subjects' self-evaluation, the CBI was rated higher than the audio tape in delivering the lessons. Subjects also reported that they needed less time on mastering the lessons while the CBI was used.

Although the results of the study indicated that using CBI to help practice Chinese was better than the use of audio tape, it was limited in recognition of students' utterance in order to help them practice the speaking skill. Furthermore, the study had demonstrated that it is possible to use CBI materials to teach non-alphabetical languages. It is recommenced that further study to compare the two different instructional tools is appropriate. Future studies should explore the capability of integrating many instructional methods in the development of CBI instructional material for teaching a non-alphabetic language like Chinese.